IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently amended): A crystalline layered compound represented by

$[(Si_{18-x} \cdot O_{38}) \cdot M_y \cdot (TMA)_z \cdot (H_2O)_w]$

wherein

TMA is a tetraalkylammonium cation,

M is a cation of an alkali metal selected from the group consisting of Na, K, Li, and Rb,

x satisfies $0 \leq x \leq 1.2$,

y satisfies $0.5 \leq y \leq 1.5$,

z satisfies $6 \leq z \leq 8$, and

w satisfies $0.02 \leq w \leq 1.5$,

a basic structure thereof is a single-layer skeleton comprising:

one-dimensional micropores nanometers in size formed by a network of covalent bonds between Si and O atoms,

a ratio Q^3/Q^4 of the intensity of a resonance in a ^{29}Si-MAS NMR spectrum at 94 to 107 ppm (Q^3) to the intensity of a resonance at 107 to 125 ppm (Q^4) is 0.714 or larger,

a lattice spacing d in the powder x-ray diffraction pattern is described in Table 1 below:

Table 1

d(Å)	Relative strength
10.47±0.2	vs
8.38±0.15	w
7.34±0.15	m
7.00±0.1	m
6.51±0.1	m
6.45±0.1	s
5.86±0.05	m
5.82±0.04	m
5.66±0.04	w
5.23±0.04	m
5.07±0.04	w
4.90±0.04	s
4.75±0.04	m
4.57±0.04	w
4.40±0.04	m
4.35±0.04	s
4.26±0.04	s
4.19±0.04	vs
4.00±0.04	m
3.94±0.035	s
3.85±0.035	s

3.83±0.035	vs
3.78±0.035	w
3.67±0.035	m
3.63±0.035	s
3.60±0.035	w
3.55±0.035	m
3.51±0.035	m
3.50±0.035	vs
3.48±0.035	vs
3.38±0.035	m
3.34±0.035	w
3.32±0.035	s

wherein d is the lattice spacing, w = weak relative strength, m = moderate relative strength, s = strong relative strength and vs = extremely strong relative strength.

Claim 2 (Previously presented): The crystalline layered compound according to Claim 1, wherein in the layered compound a local coordination of the O atoms surrounding the Si atoms in the Si-O network is tricoordinate and tetracoordinate.

Claim 3 (Previously presented): The crystalline layered compound according to Claim 1, comprising:

alkali metal cations and

an organic structure directing agent in gaps formed between layers of the crystal structure.

Claim 4 (Previously presented): The crystalline layered compound according to Claim 1, wherein an effective gap formed between layers of the crystal structure is 3 Å or more.

Claim 5 (Previously presented): The crystalline layered compound according to Claim 1, wherein the layered compound comprises pores formed of skeletal sites which are silicon 5-member rings or larger.

Claim 6 (Currently amended): A method for manufacturing the crystalline layered compound according to claim 1, comprising heating a raw material composition of a crystalline layered compound in the presence of an organic structure directing agent, to synthesize [[a]] <u>the</u> crystalline layered compound ~~represented by~~ <u>of formula:</u>

$[(Si_{18-x} \cdot O_{38}) \cdot M_y \cdot (TMA)_z \cdot (H_2O)_w]$

wherein

TMA is a tetraalkylammonium cation,

M is a cation of an alkali metal selected from the group consisting of Na, K, Li and Rb,

x satisfies $0 \leq x \leq 1.2$,

y satisfies $0.5 \leq y \leq 1.5$,

z satisfies $6 \leq z \leq 8$, and

w satisfies $0.02 \leq w \leq 1.5$.

Claim 7 (Canceled).

Claim 8 (Previously presented): The method for manufacturing a crystalline layered compound according to Claim 6, wherein the organic structure directing agent is at least one selected from the group consisting of tetramethylammonium salts, tetraethyl ammonium salts, tetrapropylammonium salts, tetrabutylammonium salts, other quaternary alkylammonium salts and amines.

Claim 9 (Withdrawn): A zeolite comprising the chemical composition represented by $[(Si_{36-x}T_y \cdot O_{72}) \cdot M_2]$ (wherein M is a cation of an alkali metal such as Li, Na, K or Rb, T represents Al, Ga, Fe and Ce as skeleton substituting elements, x satisfies $0 \leq x \leq 3.0$, y satisfies $0 \leq y \leq 1.0$, and z satisfies $0 \leq z \leq 3.0$), and having a micropore structure made up of covalent bonds between Si and O atoms.

Claim 10 (Withdrawn): The zeolite according to Claim 9, wherein the lattice spacing d (Å) in the powder x-ray diffraction pattern is as described in Table 2 or 3 below.

Table 2

d(Å)	Relative strength
9.17±0.05	100
6.86±0.05	35
6.11±0.05	5
5.50±0.05	4
4.84±0.05	1
4.70±0.05	1
4.58±0.05	3
4.44±0.05	7

4.35±0.05	7
4.09±0.05	6
3.88±0.05	8
3.81±0.05	9
3.68±0.05	3
3.43±0.05	25
3.41±0.05	29
3.31±0.05	8
3.24±0.05	9
3.07±0.05	1

Table 3

d(Å)	Relative strength
9.25±0.05	100
8.85±0.05	7
7.67±0.05	4
6.85±0.05	65
6.14±0.05	7
4.74±0.05	6
4.65±0.05	7
4.49±0.05	13
4.40±0.05	5
4.10±0.05	5
3.90±0.05	7
3.84±0.05	8

3.71±0.05	5
3.44±0.05	30
3.34±0.05	14
3.26±0.05	9
3.08±0.05	4
2.99±0.05	3
2.89±0.05	2
2.75±0.05	1
2.37±0.05	2
1.97±0.05	2
1.86±0.05	2

Claim 11 (Withdrawn): The zeolite according to Claim 9, wherein the crystal structures can be described as orthorhombic with crystal lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 7.37 ± 0.03Å (space group Pnma), orthorhombic with lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 7.37 ± 0.03 Å (space group Pnnm), orthorhombic with lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 14.74 ± 0.03Å (space group Pbcm) monoclinic with lattice constants in the range of a = 18.35 ± 0.05Å, b = 13.77 ± 0.03, c = 7.37 ± 0.03Å, β = 90 ± 0.3° (space group P21/m).

Claim 12 (Withdrawn): The zeolite according to Claim 9, wherein the local coordination of the O atoms surrounding the Si atoms in the skeleton structure is tetracoordinate.

Claim 13 (Withdrawn): The zeolite according to Claim 9, wherein the skeletal structure formed by the binding of the Si and O atoms has a regular geometry.

Claim 14 (Withdrawn): The zeolite according to Claim 9, having pores with a mean size of 0.48 nm or more due to gas adsorption.

Claim 15 (Currently amended): A method for manufacturing a zeolite comprising performing dehydration polycondensation of the crystalline layered compound or crystalline layered compound containing skeletal substituted elements defined in Claim 1, to synthesize a zeolite represented by the formula

$$[(Si_{36-x} \cdot O_{72}) \cdot M_y]$$

wherein

M is a cation of an alkali metal selected from the group consisting of Li, Na, K and Rb,

x satisfies $0 \leq x \leq 3.0$, and

y satisfies $0 \leq y \leq$[[1.0]] 3.0 ~~and~~

~~z satisfies 0 ≤z ≤3.0~~.

Claim 16 (Previously presented): The method for manufacturing a zeolite according to Claim 15, wherein dehydration polycondensation comprises a vacuum in the range of 1×10^{-3} to 1×10^{-8} torr.

Claim 17 (Previously presented): The method for manufacturing a zeolite according to Claim 15, wherein a temperature for the dehydration polycondensation is 300 to 800°C.

Claim 18 (Previously presented): The method for manufacturing a zeolite according to Claim 15, wherein the dehydration polycondensation is at atmospheric pressure.

Claim 19 (Previously presented): The method for manufacturing a zeolite according to Claim 17, wherein the heating temperature for dehydration polycondensation is 400 to 800°C.

Claim 20 (Previously presented): The method for manufacturing a zeolite according to Claim 15, wherein a rate of temperature rise in the dehydration polycondensation is 0.5 to 50°C per minute.

Claim 21 (Previously presented): The method for manufacturing a zeolite according to Claim 15, wherein dehydration polycondensation comprises a flow of combustion-supporting gas comprising molecular oxygen.

Claim 22 (Withdrawn): A catalyst or separation/adsorption material comprising the zeolite according to any of Claims 9 through 14.

Claim 23 (Withdrawn): A zeolite membrane characterized by comprising a zeolite (CDS-1) formed as a membrane on a support, said zeolite having the chemical composition represented by $[(Si_{36-x} \cdot O_{72}) \cdot M_y]$ (wherein M is a cation of an alkali metal such as Na, K or Li, x satisfies $0 \leq x \leq 3.0$, y satisfies $0 \leq y \leq 3.0$) and a micropore structure made up of covalent bonds between Si and O atoms, with a silicate structure of repeating units of Si-O tetrahedral coordination and geometrical crystal structures (atomic arrangement) comprising silicon 5-member and 8-member rings.

Claim 24 (Withdrawn): The zeolite membrane according to Claim 23, wherein said crystal structures are (1) orthorhombic with crystal lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 7.37 ± 0.03Å (space group Pnma), (2) orthorhombic with lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 7.37 ± 0.03 Å (space group Pnnm), (3) orthorhombic with lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 14.74 ± 0.03Å (space group Pbcm) and (4) monoclinic with lattice constants in the range of a = 18.35 ± 0.05 Å, b = 13.77 ± 0.03, c = 7.37 ± 0.03 Å, β = 90 ± 0.3° (P21/m).

Claim 25 (Withdrawn): The zeolite membrane according to Claim 23, wherein the lattice spacing d (Å) in the powder x-ray diffraction pattern is at least as described in Tables 4 and 5.

Table 4

d(Å)	Relative strength (peak)
9.17±0.05	100
6.86±0.05	35
6.11±0.05	5
5.50±0.05	4
4.84±0.05	1
4.70±0.05	1
4.58±0.05	3
4.44±0.05	7
4.35±0.05	7

4.09±0.05	6
3.88±0.05	8
3.81±0.05	9
3.68±0.05	3
3.43±0.05	16
3.41±0.05	18
3.31±0.05	8
3.24±0.05	9
3.07±0.05	1

Table 5

d(Å)	Relative strength (peak)
9.25±0.05	100
8.85±0.05	7
7.67±0.05	4
6.85±0.05	65
6.14±0.05	7
4.74±0.05	6
4.65±0.05	7
4.49±0.05	13
4.40±0.05	5
4.10±0.05	5
3.90±0.05	7
3.84±0.05	8
3.71±0.05	5

3.44±0.05	30
3.34±0.05	14
3.26±0.05	9
3.08±0.05	4
2.99±0.05	3
2.89±0.05	2
2.75±0.05	1
2.37±0.05	2
1.97±0.05	2
1.86±0.05	2

Claim 26 (Withdrawn): The zeolite membrane according to Claim 23, wherein the support is a porous base of an inorganic porous body, metal or metal oxide.

Claim 27 (Previously presented): A method to manufacture a zeolite membrane, comprising:

coating a porous support with seed crystals; and

forming a crystalline layered silicate (PLS), represented by the formula

$[(Si_{18-x}\cdot O_{38})\cdot M_y(TMA)_z \cdot (H_2O)_w]$

wherein TMA is a tetraalkylammonium cation,

M is a cation of an alkali metal, selected from the group consisting of Li, Na, K and Rb,

x satisfies $0 \leq x \leq 1.2$,

y satisfies $0.5 \leq y \leq 1.5$,

z satisfies $6 \leq z \leq 8$;

w satisfies $0.02 \leq w \leq 1.5$

condensing Si-OH groups in the PLS to convert the PLS to a CDS-1 having a geometrical crystal structure and thereby forming a zeolite membrane on the porous support,

wherein

the geometrical crystal structure of the CDS-1 comprises silicon 5-member and 8-member rings, and

comprises a single-layer silicate skeleton comprising one-dimensional micropores nanometers in size formed by a network of covalent bonds between Si and O atoms.

Claim 28 (Previously presented): The method to manufacture a zeolite membrane according to Claim 27, wherein the seed crystals are PLS seed crystals.

Claim 29 (Previously presented): The method to manufacture a zeolite membrane according to Claim 27, wherein the porous support is a porous base of an inorganic porous body, metal or metal oxide.

Claim 30 (Previously presented): The method according to Claim 28, wherein the PLS membrane is heated to 300°C to 800°C to condense the Si-OH groups in the PLS and convert to CDS-1.

Claim 31 (Previously presented): The method according to Claim 30, wherein the PLS membrane is heated under reduced pressure.

Claim 32 (Previously presented): The method according to Claim 28, wherein the PLS membrane is formed by hydrothermal synthesis at a temperature of 140 to 170°C.

Claim 33 (Previously presented): The method according to Claim 27, wherein CDS-1 crystals synthesized from PLS are first applied to a support, and a membrane is then formed by secondary growth of the crystals.

Claim 34 (Withdrawn): A method for manufacturing ϵ-caprolactam from cyclohexanone oximeϵ-caprolactam, characterized in that a zeolite (CDS-1) having the chemical composition represented by $[(Si_{36-x}T_y \cdot O_{72}) \cdot M_z]$ (wherein M is a cation of an alkali metal such as Li, Na, K or Rb, T represents Al, Ga, Fe and Ce as skeleton substituting elements, x satisfies $0 \leq x \leq 3.0$, y satisfies $0 \leq y \leq 1.0$ and z satisfies $0 \leq z \leq 3.0$), and having a micropore structure made up of covalent bonds between Si and O atoms and a geometric crystal structure (atomic arrangement) comprising silicon 5-member and 8-member rings is used as a catalyst.

Claim 35 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein CDS-1 obtained by dehydration polycondensation at atmospheric pressure is used.

Claim 36 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein CDS-1 obtained by dehydration polycondensation at a heating temperature of 300 to 800°C is used.

Claim 37 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein CDS-1 obtained by dehydration polycondensation with a rate of temperature rise of 0.1 to 10°C/minute is used.

Claim 38 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein CDS-1 obtained by treating the crystalline layered silicate compound which is the precursor with a group 6 transitional metal oxide in the CDS-1 synthesis process is used.

Claim 39 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein the lattice spacing d (Å) in the powder x-ray diffraction pattern of the CDS-1 exhibits at least the diffraction peaks given in Table 6 below.

Table 6

d(Å)	Relative strength (peak)
9.17±0.05	100
6.86±0.05	35
6.11±0.05	5
5.50±0.05	4
4.58±0.05	3
4.44±0.05	7
4.35±0.05	7
4.09±0.05	6
3.88±0.05	8
3.81±0.05	9
3.68±0.05	3
3.43±0.05	16
3.41±0.05	18

3.31±0.05	8
3.24±0.05	9

Claim 40 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein the CDS-1 has micropores with a mean pore size of 0.483 nm or more based on physical adsorption and a volume of 0.6 cc/g or more.

Claim 41 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein the CDS-1 used in the Beckmann rearrangement reaction is cation exchanged or hydrogen ion exchanged.

Claim 42 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein the reaction temperature in the method for manufacturing ϵ-caprolactam from cyclohexanone oxime is 150 to 500°C.

Claim 43 (Withdrawn): The method for manufacturing ϵ-caprolactam according to Claim 34, wherein the WHSV of the cyclohexanone oxime is between 0.001 h-1 and 20.0 h-1.